It was shown by Hamel and King that a Schur polynomial times a deformation of the Weyl denominator could be expressed as the partition function of a statistical mechanical system, the six vertex model with particular Boltzmann weights. A new proof of this is given using the Yang-Baxter equation. Using the Casselman-Shalika formula, this gives an interpretation of the Whittaker function on $GL(n,F)$ where $F$ is a p-adic field. This “statistical” interpretation extends to the metaplectic covers of $GL(n,F)$, and gives a new method of studying p-adic Whittaker functions. (Received September 21, 2009)